

Notice of Allowability

Application No.

09/877,202

Applicant(s)

KIMURA, EIJI

Examiner

Tu T. Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 09/24/2004.
2. The allowed claim(s) is/are 1,5,7,8,13,16,17,22,25 and 26.
3. The drawings filed on 07 September 2004 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) hereto or 2) to Paper No./Mail Date _____.
(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
 Paper No./Mail Date _____
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Bindseil on 09/24/2004.

The application has been amended as follows:

Please replace claims 1,5,7,8,13 with the following:

1. **(currently amended)** An optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through in one direction only and a second optical transmission line letting light through only on a direction opposite to the aforementioned direction comprising:

a variable wavelength light source for generating a variable wavelength light;

a first light modulating [[means]] mechanism for introducing into said first optical transmission line a first incident light obtained by modulating said variable wavelength light by a frequency of an electrical signal inputted;

a first optical/electrical converting [[means]] mechanism for converting by a first optical/electrical conversion process the first incident light having penetrated said first optical transmission line;

a fixed wavelength light source for generating a fixed wavelength light;

a signal source for generating a reference electrical signal;

a second light modulating [[means]] mechanism for injecting into said second optical transmission line a second incident light obtained by modulating said fixed wavelength light by a frequency of said reference electrical signal; and

a second optical/electrical converting [[means]] mechanism for converting by a second optical/electrical conversion process the second incident light having penetrated said second optical transmission line; and for outputting electrical signal onto said first light modulating [[means]] mechanism.

5. **(currently amended)** The optical characteristic measuring apparatus according to claim 1 comprising:

a phase comparing [[means]] mechanism for measuring a phase difference between [[an electrical]] a first output signal from [for measurement output by] said first optical/electrical converting [[means]] mechanism and said reference electrical [signals] signal; and

a characteristic computing [[means]] mechanism for computing a group delay characteristic or a dispersion characteristic of the devices under test by using said phase difference.

7. **(currently amended)** A light generating apparatus used in an apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through only in one direction and a second optical transmission line letting light through only on a direction opposite to said one direction comprising:

a variable wavelength light source for generating a variable wavelength light;

a first light modulating [[means]] mechanism for introducing into said first optical transmission line a first incident light obtained by modulating said variable wavelength light by a frequency of an electrical signal inputted; and

a second optical/electrical converting [[means]] mechanism for converting by an optical/electrical conversion process a second incident light having penetrated said second optical transmission line and for outputting the electrical signal onto said first light modulating [[means]] mechanism.

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8. **(currently amended)** An optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through only in one direction and a second optical transmission line letting light through only in a direction opposite to said one direction comprising:

a first optical/electrical converting [[means]] mechanism for converting by a first optical/electrical conversion process a first incident light having penetrated said first optical transmission line;

a fixed wavelength light source for generating a fixed wavelength light;

a signal source for generating a reference electrical signal; and

a second light modulating [[means]] mechanism for introducing into said second optical transmission line a second incident light obtained by modulating said fixed wavelength light by a frequency of said reference electrical signal.

13. **(currently amended)** An optical characteristic measuring method for measuring characteristics of devices under test having a first optical transmission line letting light through in one direction only and a second optical transmission line letting light through only on a direction opposite to the aforementioned direction comprising:

a variable wavelength light generating step for generating a variable wavelength light;

a first light modulating step for introducing into said first optical transmission line a first incident light obtained by modulating said variable wavelength light by a frequency of an electrical signal inputted;

a first optical/electrical converting step for converting by a first optical/electrical conversion process the first incident light having penetrated said first optical transmission line;

a fixed wavelength light generating step for generating a fixed wavelength light;

a signal generating step for generating a reference electrical signal;

a second light modulating step for injecting into said second optical transmission line the second incident light obtained by modulating said fixed wavelength light by a frequency of said reference electrical signal; and

a second optical/electrical converting step for converting by a second optical/electrical conversion process the second incident light having penetrated said second optical transmission line; and for outputting the onto said first light modulating step.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Prior arts of record do not disclose an optical characteristic measuring apparatus for measuring characteristics of devices under test. The apparatus comprises: a first optical/electrical converting mechanism for converting a first incident light having penetrated a first optical transmission line; a fixed wavelength light source for generating a fixed wavelength light; a signal source for generating a reference electrical signal; a second light modulating mechanism for introducing into a second optical transmission line a second incident light obtained by modulating said fixed wavelength light by a frequency of said reference electrical signal which structurally arranged and functionally operated as claimed in claims 1,7,8,13,16,17,22,25,26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

09/28/2004